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Claims

(45)

1. Flexible container (3,30,34) made of film material for containing a fluid substance comprising a fill opening (9) and a partitioning means along which a first container wall part is placed against a second container wall part, the partitioning means dividing the container in a first (17,32,33,38) and a second (17,18,19,32,33,38,42,43) compartment, characterised in that the partitioning means comprises a restraining member (13,14,23,24) which maintains a substantially fluid tight separation of the first and second compartment until a predetermined pressure is achieved in the first compartment, at which predetermined pressure the restraining member is released by the fill pressure for placing the first and second compartment in fluid communication.
2. Flexible container according to claim 1, wherein the restraining member comprises two closure lines (13,14) which extend essentially from the top of the container to the bottom thereof.
3. Flexible container (3) according to claim 2, characterised in that the front film layer is joined to the back film layer along the closure lines (13, 14).
4. Flexible container (3) according to claim 1 or 2, characterised in that the container is folded double along closure lines (13, 14), a first layer of the film material folded double being attached via the restraining means (23, 24) to a second layer of the film material folded double.
5. Flexible container (3) according to claim 4, characterised in that the means offering resistance (23, 24) comprise adhesive tape.
6. Flexible container (3) according to claim 4 or 5, characterised in that on either side of a centre line of the container two side strips (20, 21) of the container are folded double along fold lines (13, 14) located parallel to the centre line.

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7. Flexible container (30, 34) according to claim 1, characterised in that a portion of the film material has been displaced from the peripheral edge of the container to the centre of the container and is positioned between wall sections located opposite one another, the restraining member connecting said opposite wall sections.

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8. Flexible container (3, 30, 34) according to one of the preceding claims, characterised in that the fill opening is provided with a shut-off valve (10), air being at least partially removed from the container.

10 9. Filling method for filling a flexible container (3, 30, 34) with a fluid substance, comprising the following steps:

- placing the flexible container (3, 30, 34) in a relatively rigid container (2), the flexible container being provided with a film material for containing a fluid substance comprising a fill opening (9) and a partitioning means along which a first container wall part is placed  
15 against a second container wall part, the partitioning means dividing the container in a first (17,32,33,38) and a second (17,18,19,32,33,38,42,43) compartment, characterised in that the partitioning means comprises a restraining member (13,14,23,24) which maintains a substantially fluid tight separation of the first and second compartment until a  
20 predetermined pressure is achieved in the first compartment, at which predetermined pressure the restraining member is released by the fill pressure for placing the first and second compartment in fluid communication;
- filling the first compartment with the fluid substance via a fill opening (9) in the container (3, 30, 34);
- releasing the restraining member (13, 14, 23, 24) via the fill pressure such that the  
25 second compartment (18, 19, 32, 33, 42, 43) is opened ;and
- filling the second compartment (18, 19, 32, 33, 42, 43) until the film material of the flexible container (3, 30, 34) is in contact with the wall of the rigid container (2).

30 10. Method according to Claim 9, characterised in that air is removed from the flexible container before the flexible container (3, 30, 34) is inserted in the rigid container (2).

11. Method according to Claim 9 or 10, characterised in that the flexible container (3, 30, 34) is folded double along closure lines (13, 14), the container sections folded double being

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attached to one another by means offering resistance (23, 24, 40, 41) which are released by the fill pressure.

12. Method according to Claim 9, 10 or 11, characterised in that during filling the flow rate  
5 and/or the fill pressure are measured and in that a change in rate and/or fill pressure is determined on release of the restraining member.